**BACKGROUND**

Extracellular calcium-sensing receptor (CaSR), also designated parathyroid cell calcium-sensing receptor, is an integral membrane protein that belongs to the G protein-coupled receptor family. CaSR is involved in maintaining a stable calcium concentration by acting as a sensor of the extracellular calcium levels for the parathyroid and kidney. Its activity is mediated by a G protein which activates a phosphatidylinositol-calcium second messenger system. Defects that activate CaSR cause autosomal dominant hypocalcemia, whereas mutations that inactivate the protein cause familial hypocalcemic hypercalcemia. CaSR is expressed mainly in kidney, and is also expressed in intestine, placenta and brain.

**CHROMOSOMAL LOCATION**

Genetic locus: CASR (human) mapping to 3q21.1; Casr (mouse) mapping to 16 B3.

**SOURCE**

CaSR (6D4) is a mouse monoclonal antibody raised against amino acids 15-29 of CaSR of rat origin.

**PRODUCT**

Each vial contains 200 µg IgG kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

CaSR (6D4) is available conjugated to agarose (sc-47741 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-47741 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47741 PE), fluorescein (sc-47741 FITC), Alexa Fluor® 488 (sc-47741 AF488), Alexa Fluor® 546 (sc-47741 AF546), Alexa Fluor® 594 (sc-47741 AF594) or Alexa Fluor® 647 (sc-47741 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47741 AF680) or Alexa Fluor® 790 (sc-47741 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**APPLICATIONS**

CaSR (6D4) is recommended for detection of CaSR of mouse, rat, human and rabbit origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).


Molecular Weight of CaSR: 160 kDa.

Positive Controls: HEK293T whole cell lysate: sc-45137, rat placenta extract: sc-364808 or rat brain extract: sc-2392.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**DATA**

![Western blot analysis of CaSR expression in rat brain (A) and rat placenta (B) tissue extracts.](image1)

![Western blot analysis of CaSR expression in HEK293T whole cell lysate.](image2)

**SELECT PRODUCT CITATIONS**


**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.